

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
10 February 2005 (10.02.2005)

PCT

(10) International Publication Number  
**WO 2005/012471 A3**

(51) International Patent Classification:  
C07C 51/36 (2006.01)

(21) International Application Number:  
PCT/US2004/024955

(22) International Filing Date: 30 July 2004 (30.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/492,160 31 July 2003 (31.07.2003) US  
60/525,914 30 November 2003 (30.11.2003) US  
10/750,457 31 December 2003 (31.12.2003) US  
60/546,397 21 February 2004 (21.02.2004) US

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(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,  
SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,  
GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

- with international search report
- before the expiration of the time limit for amending the  
claims and to be republished in the event of receipt of  
amendments

(88) Date of publication of the international search report:  
21 September 2006

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: LOW TRANS-FATTY ACID FAT COMPOSITIONS; LOW-TEMPERATURE HYDROGENATION, E.G., OF EDI-  
BLE OILS

(57) Abstract: The present disclosure provides low trans-fatty acid fat compositions, methods of hydrogenating unsaturated feed-  
stocks (e.g., oils), and hydrogenation catalyst compositions. One exemplary method involves producing a catalyst composition by  
heating a nickel-based catalyst to a first temperature of at least about 85° C in the presence of hydrogen and a fat component. An  
unsaturated feedstock may be contacted with the catalyst composition and hydrogenated by sustaining a hydrogenation reaction at a  
second temperature of no greater than about 70° C. Some specific implementations of the invention permit the production of partially  
hydrogenated seed oils with low *trans*-fatty acid contents.

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